Exercise 19-4

This exercise must be completed after Exercise 19-3 and continues the process of using cross sections to determine bridge length. In this exercise a new TIN is created, which represents the maximum height of the fill slopes.

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1. Open the MicroStation file:
   t:\br-proj\a_geopak\d5\j5p0100\data\xs_50Clear_j5p0100.dgn.

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2. Open the project **t:\br-proj\a_geopak\d5\j5p0100\project\j5p0100.prj**.

   Enter the as user **userc**.

   Go into **Road**.

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3. Select the **50Clear** working alignment.

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4. Choose **Reports and XS Quantities** from the **Project Manager** dialog.

   Reports & XS
   Quantities

   Select the **DTM Input** report.

   The dialog shown below will appear. Enter the information as shown:

   Creating DTM Input File

   Job 100   Cur Sta   465+10.00 R 1
   Chain ROUTE50 ▼
   Beg Sta 465+10.00 R 1   465+10.00 R 1
   End Sta 466+99.00 R 1   466+99.00 R 1

   XS Elements
   Level 17-28   Color 0-253   Select
   Weight 0-15   Style 0-7

   ☐ Pause on Each XS
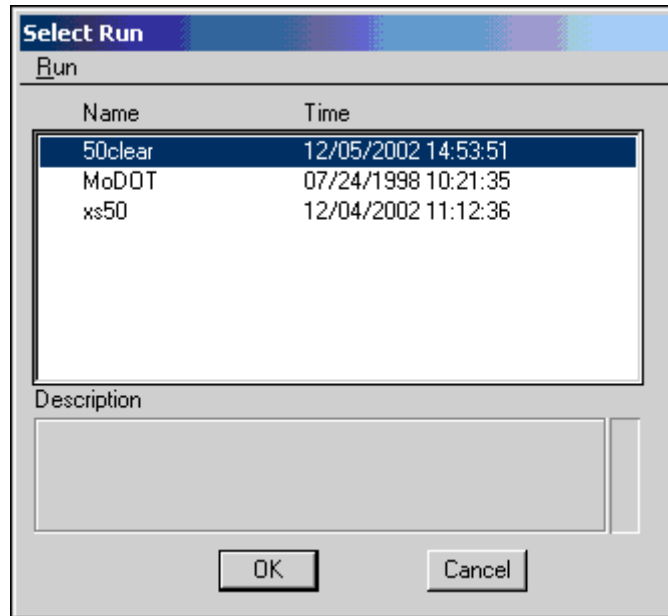
   ASCII File xs50clear.dat   File

   Apply

   Once the information is entered, click on **Apply**. Close the Reports and XS Quantities dialog when the Create DTM Input File process is completed.
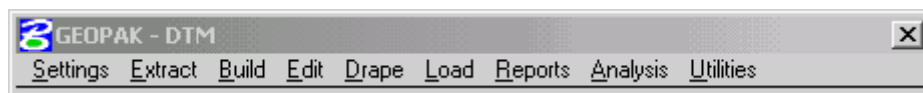
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5. Choose **Existing Ground** from the **Project Manager** dialog.

Copy the **MoDOT** run to **50clear**, and open that run.

From the DTM menu, shown below, select **Build > Triangles**.

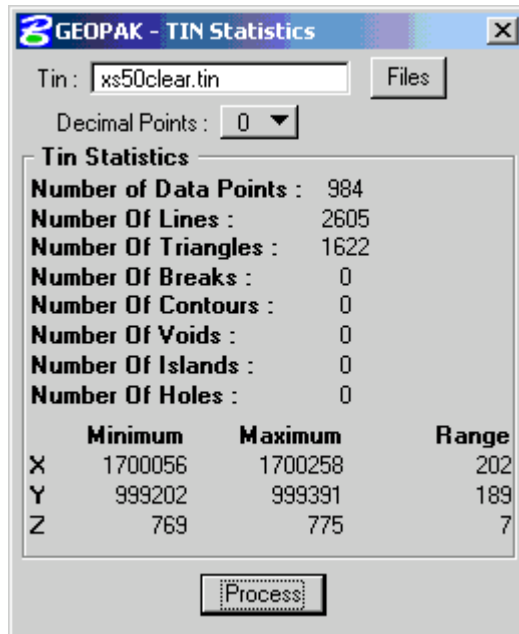When the following dialog appears, populate it as shown below:

Data File: **xs50clear.dat**
TIN File: **xs50clear.tin**
Dissolve Option: **Side**
Side Length: **25**

When the "Build Triangles Complete" appears in the MicroStation Status Bar, close the Build Triangles dialog. Say YES, when asked if you want to save the settings.
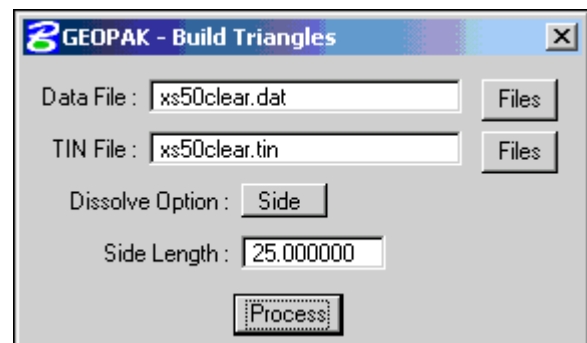
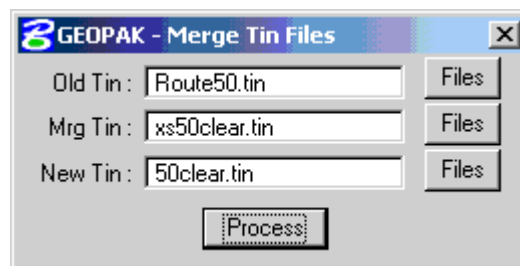6. Select **Reports > Triangle Statistics** from the DTM menu.

   When the following dialog appears, load the file **xs50clear.tin** and Process the report. Compare your results to those shown below.


7. Select **Build > Merge TINs** from the DTM menu.

   When the following dialog appears, populate it as shown below:

Old Tin:	**Route50.tin**
Mrg Tin:	**xs50clear.tin**
New Tin:	**50clear.tin**

   Once the dialog is set, click on **Process**. When the "Build Merge Complete" appears in the MicroStation Status Bar, close the Merge Tin Files dialog.

8. Check the statistics for **50clear.tin**. Compare your results to those shown below.
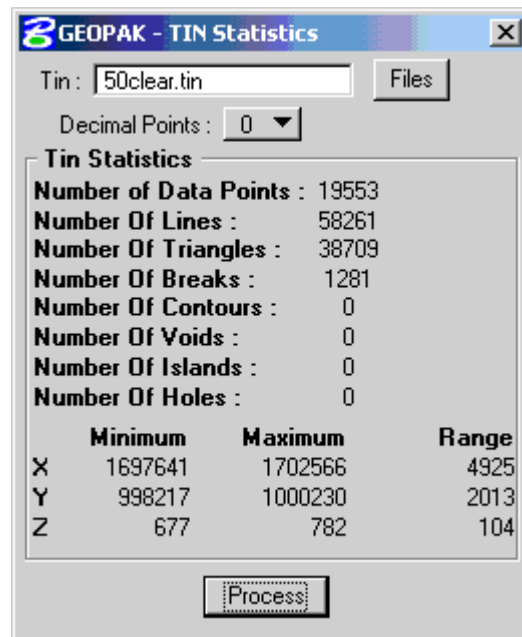

If you wish you may open either topo_J5P0100.dgn (2D file) or dtm_J5P0100.dgn (2D file) and view either of the tins created in this exercise.

Exit the DTM tools.

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9. 50clear.tin will be used for cutting cross sections for Big Horn drive. To prepare for that, select the **BigHorn Working Alignment** and click on **Define** in the Road Project dialog.

Go to the **DTM** section of the working alignment definition and select **50clear.tin** for the **Existing Ground TIN** and the **Portview TIN** as shown below.
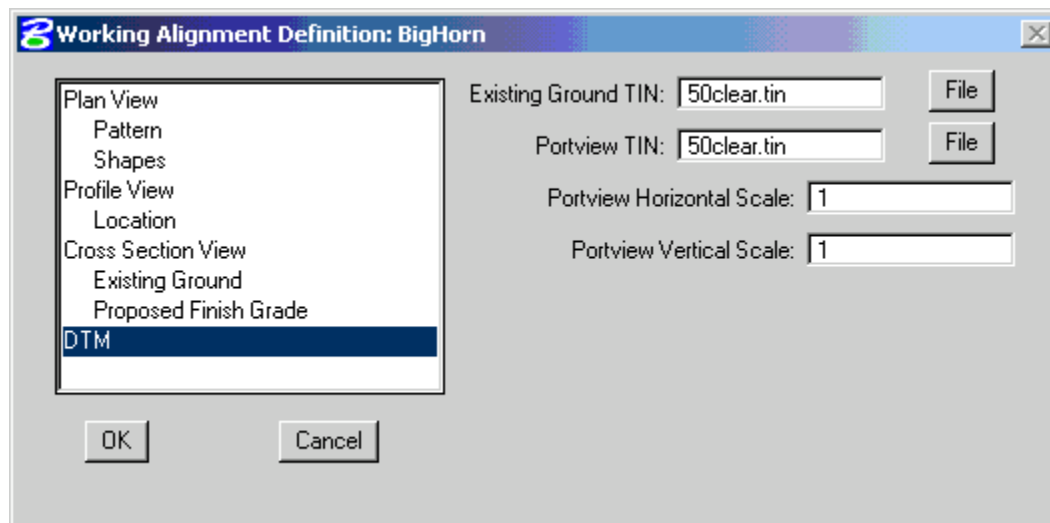
Click **OK** to save the changes to the working alignment definition.